



PTO/SB/08a (02-09)

Approved for use through 03/31/2009. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1

of 5

**Complete if Known**

Application Number	10/590,527
Filing Date	August 24, 2006
First Named Inventor	Marcus Brian Mayhall FENTON
Art Unit	3752
Examiner Name	Steven Michael CERNOCH

Attorney Docket Number C049105/0225758

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
A1	US-	5,269,461	12/14/1993	Davis	
A2	US-	5,312,041	05/17/1994	Williams et al.	
A3	US-	5,495,893	03/05/1996	Roberts et al.	
A4	US-	5,520,331	05/28/1996	Wolfe	
A5	US-	5,597,044	01/28/1997	Roberts et al.	
A6	US-	5,615,836	04/01/1997	Graef	
A7	US-	6,065,683	05/23/2000	Akin et al.	
A8	US-	6,796,704	09/28/2004	Lott	
A9	US-	6,637,518	10/28/2003	Hillier et al.	
A10	US-	2005/0000700	01/06/2005	Sundholm	
A11	US-	2006/0144760	07/06/2006	Duyvesteyn et al.	
	US-				

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
B1	FR	2 376 384	07/28/1978	CECIL		
B2	SU	1653853	06/07/1991	KH Aviationsnyj Institut		
B3	WO	1992/20453	11/26/1992	SUNDHOLM, Göran		
B4	WO	1992/20454	11/26/1992	SUNDHOLM, Göran		
B5	WO	1997/38757	10/23/1997	National Foam Inc.		
B6	EP	0 911 082 A1	04/28/1999	Nii Nizkikh Temperatur Primai		

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<p>Substitute for form 1449/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p><i>(Use as many sheets as necessary)</i></p>	<p><b>Complete if Known</b></p>												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Application Number</td> <td>10/590,527</td> </tr> <tr> <td>Filing Date</td> <td>August 24, 2006</td> </tr> <tr> <td>First Named Inventor</td> <td>Marcus Brian Mayhall FENTON</td> </tr> <tr> <td>Art Unit</td> <td>3752</td> </tr> <tr> <td>Examiner Name</td> <td>Steven Michael CERNOCH</td> </tr> <tr> <td>Attorney Docket Number</td> <td>C049105/0225758</td> </tr> </table>	Application Number	10/590,527	Filing Date	August 24, 2006	First Named Inventor	Marcus Brian Mayhall FENTON	Art Unit	3752	Examiner Name	Steven Michael CERNOCH	Attorney Docket Number	C049105/0225758
Application Number	10/590,527												
Filing Date	August 24, 2006												
First Named Inventor	Marcus Brian Mayhall FENTON												
Art Unit	3752												
Examiner Name	Steven Michael CERNOCH												
Attorney Docket Number	C049105/0225758												
Sheet <b>2</b>	of <b>5</b>												

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet 2

of 5

**Attorney Docket Number**

**Complete if Known**

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
	B7	WO 2000/37143	06/29/2000	LOCKWOOD, Hanford N.		
	B8	EP 1 072 320 A1	1/31/2001	Nii Nizkikh Temperatur Primai		
	B9	EP 1 163 931 A2	12/19/2001	Williams Fire and Hazard Control Inc.		
	B10	WO 2003/030995 A2	4/17/2003	Life Mist LLC		
	B11	WO 2003/061769 A1	7/31/2003	Marioff Publication		
	B12	WO 2005/082546 A1	9/9/2005	Pursuit Dynamics PLC		

Examiner Signature	Date Considered
-----------------------	--------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: CIO, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Substitute for form 1449/PTO**

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

**(Use as many sheets as necessary)**

Sheet 3

of 5

**Complete if Known**

Application Number	10/590,527
Filing Date	August 24, 2006
First Named Inventor	Marcus Brian Mayhall FENTON
Art Unit	3752
Examiner Name	Steven Michael CERNOCH

Attorney Docket Number C049105/0225758

## **U. S. PATENT DOCUMENTS**

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)			
	B13	WO 2005/115555 A1	12/8/2005	Telesto SP. Z O.O.	

Examiner Signature	Date Considered
-----------------------	--------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND

**TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Application Number</b>	10/590,527	
		<b>Filing Date</b>	August 24, 2006	
		<b>First Named Inventor</b>	Marcus Brian Mayhall FENTON	
		<b>Art Unit</b>	3752	
		<b>Examiner Name</b>	Steven Michael CERNOCH	
Sheet <b>4</b>	of <b>5</b>	<b>Attorney Docket Number</b>	C049105/0225758	

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C1	International Search Report for PCT/GB2008/001883, dated September 26, 2008	
	C2	Arvidson, et al., The VINNOVA water mist research project: A description of the 500 m <sup>3</sup> machinery space tests, SP Swedish National Testing and Research Institute,	
		SP Fire Technology, SP Report 2003:19	
	C3	Dlugogorski, et al., Water Vapour as an Inerting Agent, Halon Options Technical Working Conference, pp. 7-18 (6-8 May 1997)	
	C4	High pressure water mist for efficient fire protection, Engineer Live (October 8, 2007)	
	C5	Liu, et al., A Review of water mist fire suppression systems – fundamental studies, National Research Council Canada (2000)	
	C6	Liu, et al., A Review of water mist fire suppression technology: Part II – Application studies, National Research Council Canada (Feb. 2001)	
	C7	Liu, et al., Review of Three Dimensional Water Fog Techniques for Firefighting, National Research Council Canada (December 2002)	
	C8	Mawhinney, et al., A State-of-the-Art Review of Water Mist Fire Suppression Research and Development -1996, National Research Council Canada (June 1996)	
	C9	Mawhinney, et al., Report of the Committee on Water Mist Fire Suppression Systems, NFPA 750, pp. 141-147 (November 2002 ROC)	

<b>Examiner Signature</b>		<b>Date Considered</b>	
---------------------------	--	------------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.  
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:  
 Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				<b>Complete if Known</b>	
				<b>Application Number</b>	10/590,527
				<b>Filing Date</b>	August 24, 2006
				<b>First Named Inventor</b>	Marcus Brian Mayhall FENTON
				<b>Art Unit</b>	3752
				<b>Examiner Name</b>	Steven Michael CERNOCH
Sheet	5	of	5	<b>Attorney Docket Number</b>	C049105/0225758

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	C10	Nigro, et al., Water Mist Fire Protection Solution for the Under-Roof Areas of the La Scala Theatre in Milan	
	C11	PDX® FireMist Comparative Data, Pursuit Dynamics plc (July 1, 2005)	
	C12	Schlosser, et al., In Situ Determination of Molecular Oxygen Concentrations in Full-Scale Fire Suppression Tests Using TDLAS, The 2nd Joint Meeting of the US Sections of the	
		Combustion Institute, Oakland, CA (March 28, 2001)	
	C13	Vaari, A Study of Total Flooding Water Mist Fire Suppression System Performance using a Transient One-Zone Computer Model, Fire Technology, 37, 327-342 (2001)	
	C14	Copy of Office Action (Paper No. 20081210) from related application (USSN 10/590,456, filed October 31, 2006) mailed December 17, 2008	
	C15	Copy of an Amendment and Response to Office Action in related application (USSN 10/590,456), which was filed on March 17, 2009 (including Electronic	
		Acknowledgement Receipt)	
	C16	Fire Suppression by Water Mist, Naval Research Laboratory, Washington, DC and Physikalisch-Chemisches Institut, Universität Heidelberg	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.  
 This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:  
 Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.